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AMATEUR RADIO DIGITAL COMMUNICATIONS

March 2023

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A Note from Rosy

Hello!

Spring is almost here, and with it we start to think about new growth and new beginnings. Personally I get excited about the longer days and coming warmth after the cold, gray winter – with near-record-breaking snow here in Portland, OR, this last February.

I've got a similar feeling going into this season at ARDC. With our new Tech Director on board – Jon KA6NVY – ARDC is now fully staffed (for now), and we're starting to see movement on the 44Net portal and (much needed) related policy development, not to mention our backlog of technical projects. Y'all know how good it feels to get caught up on all of



that – a bit like spring cleaning, as a matter of fact. There are also murmurings of new and exciting projects from our grantees. Growth, warmth, and fun is ahead.

Happy Spring!

73, Rosy, KJ7RYV

p.s. Is there something in particular you'd like for us to be sharing and reporting on? An active grant or series of grants you'd like to know more about? Reach out with your suggestions any time – contact@ardc.net. We're always open to feedback and ideas.

p.p.s. In case you're wondering, that's a picture of me at a recent visit to 4U1ITU, the station at the International Telecommunications Union (ITU) in Geneva, Switzerland. It was wonderful to be able to visit and learn more about their rich history, which goes back more than 60 years.

FreeDV Aims to Bring Open-Source HF Digital Voice into the Mainstream

FreeDV is a low-bit-rate digital voice mode for HF radio designed by hams for hams. Initially developed by David Rowe, VK5DGR, an international team of radio amateurs are now working together on the project. It is open-source software, released under the GNU Lesser Public License (LPGL) version 2.1.

An ARDC grant of \$420,000 to the FreeDV Project, which is being fiscally sponsored by the Software Freedom Conservancy, will enable them to:

- Hire experienced digital signal processing developers to work with the volunteer staff to improve speech quality and improve low signal-to-noise ratio operation, making FreeDV performance superior to single-sideband (SSB) over poor high-frequency (HF) channels.
- FreeDV

 Digital Voice
- Work with commercial HF radio companies to embed FreeDV into at least two commercial radios, greatly reducing set up effort and reducing latency.
- Continue development of a suite of advanced, open-source HF modems, with the goal of making FreeDV's digital performance comparable to VARA at both low and high signal-noise ratios.
- Continue support of the existing software library (libcodec2) and application software (freedv-gui), and embedded FreeDV adaptors (SM1000 and ezDV).
- Better promote FreeDV online and in person at amateur radio clubs and conventions.

The FreeDV Project team believes that the work funded by this grant will:

- Open the path to widespread adoption of a truly open-source, next-generation digital voice system for HF radio.
- Provide a mature, open-source low-bit-rate codec useful for a variety of amateur radio and commercial applications.
- Provide a suite of high performance, HF data modems for open-source data applications usable by any radio amateur.

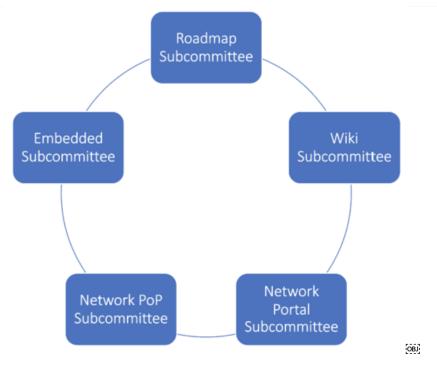
For more information about FreeDV, go to https://www.freedv.org.

TAC Update

In many ways, last year was a turning point for 44Net. We listened and learned about the use-cases, pain-points, and ideas for improvement that are already helping to guide us in evolving 44Net into an even better community resource.

We have identified key initiatives to focus on this year, each of which has a dedicated subcommittee working group that is chaired by a TAC member. There are five of these subcommittees:

- **Roadmap Subcommittee:** Develop an architectural roadmap for future 44Net services and infrastructure.
- Wiki Subcommittee: Catalog 44Net use-cases and create substantive updates to the Wiki.
- **Portal Subcommittee:** Build and launch and upgraded 44Net management portal Minimum Viable Product.
- PoP Subcommittee: Develop and measure a 44net Proof-of-Concept Point-of-Presence
- Embedded Subcommittee: Entry level embedded appliance reference design for 44Net.



We are excited about the new features and services that we are developing, and believe that they will make 44Net easier to configure and easier to use.

If you have thoughts or ideas, please don't hesitate to share them: contact@ardc.net.

Come See Us at HamSCI, QSO Today Virtual Expo, Dayton Hamvention

ARDC will be on the road again in the months ahead attending the following conferences:

• HamSCI 2023, March 17 - 18, 2023, Scranton, PA. Rosy Schechter KJ7RYV, John Hays K7VE, and Dan Romanchik KB6NU, will be attending this event.



- QSO Today Virtual Ham Expo, March 25 26, 2023.
 ARDC will once again have a presence at this event. We won't be speaking at this event, but you can visit our booth in the exhibit hall for more information about ARDC.
- Dayton Hamvention, May 19-21, 2023, Xenia, OH. We'll have a big crew at Hamvention again this year, and we will be hosting a forum on Friday, May 19, from 2:40 p.m. to 3:45 p.m. in Room 2.

Contact us!

We want to hear from you:

- Visit our website: https://www.ardc.net
- General info: contact@ardc.net
- Information and questions about grants: giving@ardc.net
- Network44 issues: postmaster@ardc.net

Follow us on Twitter: @ardc_73.

Our Mission

The mission of Amateur Radio Digital Communications (ARDC) is to support, promote, and enhance digital communication and broader communication science and technology, to

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promote amateur radio, scientific research, experimentation, education, development, open access, and innovation in information and communication technology.

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